

REMARKS

The Office Action of **February 18, 2004**, has been received and its contents carefully noted. Applicant respectfully submits that this response is timely filed and fully responsive to the Office Action.

Claims 1-3 and 6-10 are pending in the present application, with claims 1-3 and 10 amended and with claims 4-5 cancelled without prejudice or disclaimer. Independent claims 1 and 10, as amended, and claims dependent therefrom are believed to be in condition for allowance for at least the reasons stated below.

35 U.S.C. §103 Rejection

Claims 1-10 were rejected under 35 U.S.C. §103 as being unpatentable over *Thomas* (WO 98/12089) in view of *Voss* (DE 4219101 A1). Applicant respectfully contends that independent claims 1 and 10, as amended, and claims dependent therefrom are clearly patentably distinct over *Thomas* and *Voss*, taken alone or in combination, for at least the reasons advanced below.

***Thomas* and *Voss* Fail to Disclose, Teach or Suggest Control Means Being Operable to Open and Subsequently Close a Vent of A Control Valve in the Manner Claimed**

Applicant respectfully contends that *Thomas* and *Voss*, taken alone or in combination, fail to disclose, teach or suggest each and every element defined by the pending claims 1-10. For example, independent claim 1, as amended recites:

A vehicle air braking system including an air compressor, an air dryer, an air dryer control valve having a vent to atmosphere, a reservoir adapted to contain a quantity of dry air for use in regenerating desiccant of the air dryer and means to exhaust dry air through the desiccant and control valve to atmosphere, the system further including control means sensitive to the operating condition of the vehicle and operable to cause regeneration of the desiccant and purging of the control valve when the vehicle engine is stopped, **wherein said control means are operable to open said vent of the control valve and close said vent after regeneration;** and

independent claim 10, as amended, recites:

A method of regenerating an air dryer of a vehicle air braking system and purging a control valve of the air dryer at the end of the working day, the method comprising the steps of:

determining that the vehicle engine is stopped;
connecting a regeneration reservoir of dry air to the air dryer;
connecting the air dryer and control valve to atmosphere;
opening a vent of the control valve;
backflushing the air dryer and control valve to remove moisture
therefrom; and
closing said vent of the control valve.

Thus, the invention recited in independent claims 1 and 10, as amended, includes the feature of the control means being operable to open and subsequently close the vent of the control valve.

By contrast, *Voss* discloses a system comprising a compressor 3, a regulator 5, and air dryer 16, a control valve 29 and a volume of regeneration air 18. Under normal operation the control valve 29 periodically causes regeneration of the desiccant within the air dryer 16 by enabling the back flow of dry air from the purge volume. Upon switching off of the vehicle, switch 43 closes energizing timing device 41. When the timing device 41 is energized, power is supplied via line 42 to a solenoid 30, which causes the control valve 29 to switch to the regeneration position. Once this occurs, the dry air in the purge volume is used to regenerate the desiccant. After a predetermined time period, the timing device 41 is switched off thereby cutting power to solenoid 30. The control valve 29 then reverts to its normal position.

As previously argued, and as can be appreciated by the Examiner, *Voss* does not disclose, teach or suggest the passing of dry air from the purge volume through the control valve 29. *Voss* in essence discloses the use of a timer to move the control valve 29 between the regeneration and normal positions upon switching off of the vehicle. Accordingly, *Voss* fails to disclose, teach or suggest the noted feature of the control means being operable to open and subsequently close the vent of the control valve, recited in amended independent claims 1 and 10.

Thomas fails to cure the noted deficiencies in *Voss*. Specifically, *Thomas* discloses an air dryer system having a control valve 32, an air dryer 34 and a purge chamber 50. As can be seen, for example, in FIGs. 2a and 2b, the control valve is movable between a first position, whereupon air received at the inlet pipe 28 can pass to the air dryer 34, and a second position, wherein the air dryer 34 is connected to the vent 44. However, *Thomas* fails to

disclose, teach or suggest the noted feature of the control means being operable to open and subsequently close the vent of the control valve, as recited in amended independent claims 1 and 10.

Accordingly, incorporating the system of *Voss* into that of *Thomas* would provide a system, whereby a control valve is movable between the noted positions upon shutdown of the vehicle. By contrast, claims 1 and 10 have been amended to recite that the control means of the vehicle air braking system is operable to open and subsequently close the vent of the control valve, which is neither disclosed, taught nor suggested by *Voss* and *Thomas*, taken alone or in combination. Accordingly, the control valve of *Voss* is not purged and hence does not have a vent to atmosphere, whereas *Thomas*, on the other hand, discloses a vent 44 which is always open.

As is described in Applicant's disclosure, the opening and subsequent closing of the vent is highly advantageous in that it prevents the ingress of matter, such as dust and insects, and the like, and further prevents degradation of the desiccant via moisture in the ambient atmosphere. By contrast *Voss* and *Thomas*, taken alone or in combination, fail to disclose, teach or suggest the noted features and advantages.

The Dependent Claims are Allowable over *Thomas* and *Voss*

Dependent claim 2-3 and 6-9 are allowable over *Thomas* and *Voss*, taken alone or in combination, on their own merits and for at least the reasons discussed above with respect to independent claim 1.

The present amendment is submitted in accordance with the provisions of 37 C.F.R. §1.116, which after Final Rejection permits entry of amendments placing the claims in better form for consideration on appeal. As the present amendment is believed to overcome outstanding rejections under 35 U.S.C. § 103, the present amendment places the application in better form for consideration on appeal. It is therefore respectfully requested that 37 C.F.R. §1.116 be liberally construed, and that the present amendment be entered.


Conclusion

Therefore, it is believed that independent claims 1 and 10 and claims dependent therefrom are clearly patentably distinct over *Thomas* and *Voss*, taken alone or in combination. In view of the foregoing remarks, reconsideration and withdrawal of the rejection of claims 1-3 and 6-10 is earnestly solicited.

Having responded to all rejections set forth in the outstanding Office Action, it is submitted that the claims are now in condition for allowance. An early and favorable Notice of Allowance is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, the Examiner is courteously requested to contact Applicant's undersigned representative.

Respectfully submitted,

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